

Translation

PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY
(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

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| Applicant's or agent's file reference 65134AWOM1 | FOR FURTHER ACTION | See Form PCT/IPEA/416 |
| International application No. PCT/EP2004/003697 | International filing date (day/month/year) 07.04.2004 | Priority date (day/month/year) 17.04.2003 |
| International Patent Classification (IPC) or national classification and IPC | | |
| Applicant CROMPTON VINYL ADDITIVES GMBH | | |

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| 1. | This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36. |
| 2. | This REPORT consists of a total of <u>6</u> sheets, including this cover sheet. |
| 3. | This report is also accompanied by ANNEXES, comprising: <ul style="list-style-type: none"> a. <input checked="" type="checkbox"/> (sent to the applicant and to the International Bureau) a total of <u>5</u> sheets, as follows: <ul style="list-style-type: none"> <input checked="" type="checkbox"/> sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions). <input type="checkbox"/> sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box. b. <input type="checkbox"/> (sent to the International Bureau only) a total of (indicate type and number of electronic carrier(s)) _____, containing a sequence listing and/or tables related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions). |
| 4. | This report contains indications relating to the following items: <ul style="list-style-type: none"> <input checked="" type="checkbox"/> Box No. I Basis of the report <input type="checkbox"/> Box No. II Priority <input type="checkbox"/> Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability <input type="checkbox"/> Box No. IV Lack of unity of invention <input checked="" type="checkbox"/> Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement <input type="checkbox"/> Box No. VI Certain documents cited <input type="checkbox"/> Box No. VII Certain defects in the international application <input checked="" type="checkbox"/> Box No. VIII Certain observations on the international application |

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| Date of submission of the demand | Date of completion of this report |
| Name and mailing address of the IPEA/EP | Authorized officer |
| Facsimile No. | Telephone No. |

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/EP2004/003697

Box No. I

Basis of the report

1. With regard to the language, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.
- ☐ This report is based on translations from the original language into the following language _____, which is the language of a translation furnished for the purposes of:
- ☐ international search (Rule 12.3 and 23.1(b))
- ☐ publication of the international application (Rule 12.4)
- ☐ international preliminary examination (Rule 55.2 and/or 55.3)
2. With regard to the elements of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report)*:
- ☐ the international application as originally filed/furnished
- ☒ the description:
- pages 1-30 _____ as originally filed/furnished
- pages* _____ received by this Authority on _____
- pages* _____ received by this Authority on _____
- ☒ the claims:
- nos. _____ as originally filed/furnished
- nos.* _____ as amended (together with any statement) under Article 19
- nos.* 1-13 _____ received by this Authority on 14.02.2005 with
- nos.* _____ received by this Authority on telefax
- ☐ the drawings:
- sheets _____ as originally filed/furnished
- sheets* _____ received by this Authority on _____
- sheets* _____ received by this Authority on _____
- ☐ a sequence listing and/or any related table(s) – see Supplemental Box Relating to Sequence Listing.
3. ☐ The amendments have resulted in the cancellation of:
- ☐ the description, pages _____
- ☐ the claims, nos. _____
- ☐ the drawings, sheets/figs _____
- ☐ the sequence listing (*specify*): _____
- ☐ any table(s) related to sequence listing (*specify*): _____
4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).
- ☐ the description, pages _____
- ☐ the claims, nos. _____
- ☐ the drawings, sheets/figs _____
- ☐ the sequence listing (*specify*): _____
- ☐ any table(s) related to sequence listing (*specify*): _____

* If item 4 applies, some or all of those sheets may be marked "superseded."

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

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| Box No. V | Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement | | |
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| 1. Statement | | | |
| Novelty (N) | Claims | 13 | YES |
| | Claims | 1-12 | NO |
| Inventive step (IS) | Claims | | YES |
| | Claims | 1-13 | NO |
| Industrial applicability (IA) | Claims | 1-13 | YES |
| | Claims | | NO |
| 2. Citations and explanations (Rule 70.7) | | | |
| 1 This report makes reference to the following documents: | | | |
| D1: WO 03/004558 A (COGNIS DEUTSCHLAND GMBH; DAUTE PETER (DE); MARKS DIETER (DE); KLAMANN) 16 January 2003 (2003-01-16) | | | |
| D2: WO 02/072684 A (CROMPTON VINYL ADDITIVES GMBH; FRIEDRICH HANS-HELMUT (DE); WEHNER WOL) 19 September 2002 (2002-09-19) | | | |
| D3: WO 02/48249 A (CROMPTON VINYL ADDITIVES GMBH; FRIEDRICH HANS-HELMUT (DE); HOPFMANN T) 20 June 2002 (2002-06-20) | | | |
| 2 PCT Article 33(2): | | | |
| 2.1 The present claims 1-10 and 13 relate to a stabilizer system containing a) a perfluoroalkane sulfonate salt and b) at least one indole and/or urea and/or alkanol amine and/or aminouracil (I), (II), (III) or (IVa, b). The intended use is not considered | | | |

Box No. V

Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability;
citations and explanations supporting such statement

to be a technical feature for product claims
(PCT Article 6).

Claim 11 discloses a method for stabilizing
chlorine-containing polymers against
thermally induced disintegration by using
said system.

Claim 12 describes an article of daily use
contained in said system, and in this case as
well, the intended use is not regarded as a
technical feature (PCT Article 6).

2.2 D1 describes PCV stabilized by adding
fluoroalkane sulfonic acid salts (see claims
1, 4 and 8). Cyanoacetyl ureas and
aminouracils, *inter alia*, are also used as
stabilizers (see pages 3, 4 and 6). On page
2, lines 1-3, the stabilization of halogen-
containing plastics against thermal and/or
photochemical disintegration is described.
Thermal stability is determined using the
test on page 44.

Example 4 shows the use of dimethyl
aminoruracil (\approx IVa) and the sodium salt of
the trifluoromethane sulfonic acid as a
stabilizer for PVC.

D1 is prejudicial to the novelty of the
subject matter of claims 1-12.

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| Box No. V | Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement |
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2.3 Claim 13 can be regarded as novel, since a combination of perfluoroalkane sulfonate salt and alkanolamine (III) has not been disclosed.

3 PCT Article 33(3):

3.1 Proceeding from D1, the problem to be solved was that of providing a new stabilizer composition for halogenated polymers. The proposed solution cannot be regarded as inventive, since D3 discloses stabilizer systems that consist of a) perchlorate and b) alkanolamines. It was obvious for a person skilled in the art to combine the teachings of D1 (perfluoroalkane sulfonate salt) and D3 (alkanolamine), because one of the problems to be solved by both documents is that of thermally stabilizing halogen-containing polymers.

3.2 The subject matter of the claims is not inventive.

4 PCT Article 33(4):

4.1 The subject matter of the claims is industrially applicable.

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Box No. VIII **Certain observations on the international application**

The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:

See Box V.